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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/605,520	06/27/2000	Marc A. Unger	20174-000230US	3937
20350 7590 03/28/2007 TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			EXAMINER OLSEN, ALLAN W	
			ART UNIT 1763	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	03/28/2007	PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

09/605,520

Applicant(s)

UNGER ET AL.

Examiner

Allan Olsen

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 109-204,292 and 293 is/are pending in the application.
- 4a) Of the above claim(s) 110-204 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 109,292 and 293 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2000 and 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 20, 2006 has been entered.

### ***Election/Restrictions***

Claims 110-204 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 11, 2002 and January 3, 2003.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

**Claims 109, 292 and 293 are rejected under 35 U.S.C. 102(a) as being anticipated by US Patent 5,856,174 issued to Lipshutz et al. (hereinafter, Lipshutz).**

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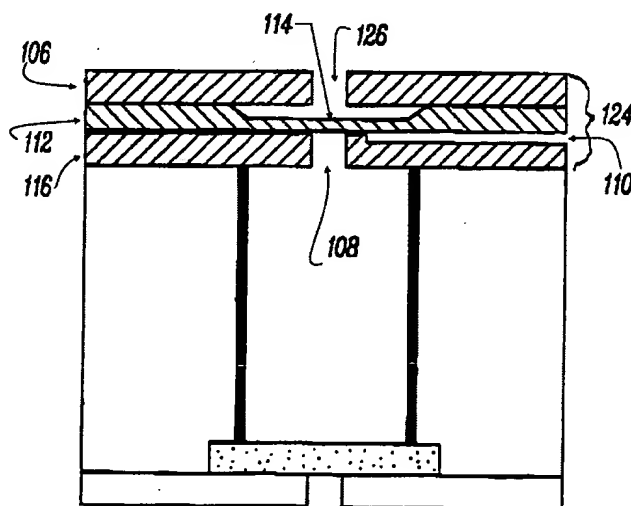
Lipshutz teaches the limitation of amended claim 109. Specifically, Lipshutz teaches a method of microfabricating an elastomeric structure, comprising:

microfabricating a first elastomeric layer (116) having a rectangular or semi-circular arched recess formed therein that forms a flow channel (110).

wherein a deflectable membrane (114) is formed integral with the first elastomeric layer;

microfabricating a second elastomeric layer (112 or 106) having a recess formed therein, wherein the deflectable membrane is deflected to close the flow channel in response to an actuation force from the recess in the second elastomeric layer;

positioning the second elastomeric layer on “top” of the first elastomeric layer; and, bonding a “bottom” surface of the second elastomeric layer onto a “top” surface of the first elastomeric layer. As depicted below the second elastomeric layer (112) is on top of the first elastomeric layer (116) layer such that a bottom surface of (112) is bonded to the top of (116). However, it should be noted that the figure below is an inverted representation of Lipschutz’s figure 2B. The inverted figure of 2B is considered to be equally applicable because the device of Lipshutz can function in any orientation and therefore it does not necessarily have a defined top and bottom.



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Regarding claims 292 and 293, Lipshutz teaches producing a structure with a plurality valves such as that depicted in figure 2b and the recess above flexible membrane (114) as depicted above has a long axis parallel to the top/bottom surfaces of the component layers.

### **Response to Arguments**

Applicant's arguments filed January 26, 2007 have been fully considered but they are not persuasive. Applicant argues:

*"the methods of microfabricating an elastomeric structure recited in the above claims, as amended, would not make the structure shown in Fig. 2B of the reference. Claims 109, 292 and 293 of the present invention all include microfabricating a first elastomeric layer having (1) a rectangular or semi-circular arched recess formed therein that forms a flow channel and (2) also having a deflectable membrane formed integral with the first layer. In contrast, the structure shown in Fig. 2B of Lipshutz shows a flow channel formed in one layer (i.e., first planar member 106) and a deflectable membrane (i.e., diaphragm 114) formed in a separate, second planar member 112. If, however, Fig 2B of Lipshutz is interpreted as having layers 112 and 116 forming an integral layer and interpreted as having 126 define a flow channel and having 114 define a deflectable membrane capable of closing the flow channel, then Applicants' claims 109, 292, and 293, as amended, are clearly distinguishable. That is, if the Lipshutz 112 and 116 layers are seen as being integral, then the recess formed within the 112/116 layer is neither rectangular nor semi-circular arched.*

In response, the examiner notes that in the above rejection, feature 110 of Lipshutz is associated with the claimed rectangular flow channel. Additionally the above rejection identified each feature of Lipshutz that corresponds to each limitation of the claims.

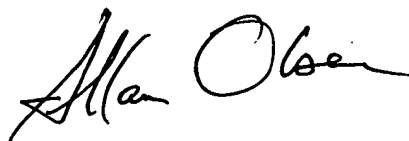
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**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Olsen whose telephone number is 571-272-1441. The examiner can normally be reached on M, W and F: 1-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "Allan Olsen", with a stylized, cursive script.

Allan Olsen  
Primary Examiner  
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